The big idea

The big idea: why your brain needs other people

Your own thoughts are just part of the picture – relationships are vital to the way you think

Huw Green

Mon 8 Jul 2024 07.30 EDT

As a neuropsychologist I feel as if I'm supposed to start this article with an attitude of deep reverence towards the brain. I might highlight its staggering number of neuronal connections (comparable in magnitude to the number of stars in the Milky Way), or draw your attention to our ever more sophisticated tools for neuroimaging getting us closer to a complete picture of how the brain works, or simply gesture towards the profound mystery of matter giving rise to experience.

But although I do often experience something of that reverence, I think it can be a distraction in our efforts to understand thought. I know from clinical experience that if the brain is damaged, so too is our cognition, often in quite regular and predictable ways. If you suffer damage to your frontal lobe then you will probably become less able to control your behaviour. If you have a stroke in the relevant part of your occipital lobe, your ability to make sense of visual information will be reduced. This brain-cognition link is an increasingly central tenet of our scientific culture but with it comes a sense that we should understand ourselves as analogous to machines. Remove a part of the hardware and the software is damaged.

The more time I spend with patients, though, the more obvious it becomes that this is only part of the picture. One of my clinical jobs is to make unusual demands of people in order to ferret out cognitive symptoms that would otherwise go unnoticed. I once interviewed a man with profound memory loss after an injury caused by a lack of oxygen to his brain. His wife, also present at the interview, took me aside afterwards. She was shocked. She hadn't realised how bad he was, because, just chatting with him, it wasn't obvious that he struggled to make new memories. But when I asked him bluntly why he was in hospital he didn't have a clue. But to what extent had I revealed a problem and to what extent had I created one? Doesn't our ability to think depend significantly on the demands our life makes of us?

Clinical work and life experience have revealed the ways in which, to a surprising degree, cognition is also something that goes on within our relationships with other people. It seems counterintuitive in the age of neuroscience, but I increasingly think that how cognitively impaired you are is a function of the social context in which you find yourself.

When I first moved into our current house with my young family, one of our elderly neighbours, Emily, came out to introduce herself. She was warm and friendly and silly with our kids in a lovely, over-the-top way. She would also repeat herself in conversation. Frequently. I wondered whether she might have dementia and, as time went on, my impression was confirmed. She saw me almost daily as I walked

the kids home from school, but each time we encountered her she introduced herself as though we hadn't met before. It never mattered. She adored the kids and they adored her. She laughed and sang with them, sometimes in the middle of the road. I worried about her, but she always seemed well and I knew that her son lived nearby and was taking care of her basic needs.

In some sense Emily was impaired. She couldn't remember who we were and she was socially disinhibited. But in another important way, the social context significantly ameliorated her impairment. Not only were her memory problems masked but she had found a space in which they were not important and where her joyous personality and infectious ebullience could thrive. This chimes with the views of some disability activists - the social model of disability suggests that people are disabled by barriers in society rather than by their physical or mental difference.

This is especially true of thinking. Consider those times when the presence of others has reminded you of an appointment, a name, or simply encouraged you to focus your attention differently. Our relationships provide a context in which to think, and a reason to think. We deliberate with one another to arrive at important decisions, talk through ideas to test them out. These processes are embedded in our political institutions. Democracies presume that significant moral and political decisions are best made through interpersonal processes of debate, rather than being left to individuals.

Developmental psychology has long recognised the social element in thinking. Almost a hundred years ago the Soviet psychologist Lev Vygotsky observed that the emergence of individual thought can be understood as the internalisation of interpersonal dialogue. Young children playing alone often talk to themselves, echoing what sound like the instructions of adults. These clearly resemble the kind of verbal structure they have been given by caregivers. Learning to think for yourself is a process of representing the contributions of others.

The people around us can also cognitively impair us. A conversational partner who seems to want to avoid a topic can make it surprisingly difficult for you to think about it properly.

So while my brain is important, cognition exists beyond my head. I make important decisions by consulting with those close to me. I use reminders and rely on family and colleagues to deliberate about plans. This sort of social process is not only supportive of my cognition - it *is* my cognition. By extension, the extent to which a person is cognitively impaired is a function of the social supports they have around them. That's not to say that we can wish away the ill effects of brain injury and dementia. Damage to the brain will tend to lead to difficulties in thinking. But to talk

dementia. Damage to the brain will tend to lead to difficulties in thinking. But to talk about cognitive impairment is to talk about something that couldn't exist in the same way without the other people who populate our lives.

Huw Green is a clinical psychologist and neuropsychologist at Addenbrooke's hospital in Cambridge. He is working on a book about neuropsychology and personhood.

Further reading

Talking Heads: The New Science of How Conversation Shapes Our Worlds by Shane O'Mara (Bodley Head, £22)

The Complete Guide to Memory: The Science of Strengthening Your Mind, Richard Restak (Penguin Life, £10.99)

Social: Why Our Brains are Wired to Connect, by Matthew Lieberman (Oxford, £12.99)